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ABSTRACT

The purpose of this six-week training institute was to orient selected black students to the nature and general procedures related to the methodology of educational research. The primary objectives of the program are as follows: (1) to enable the students to identify pertinent educational problems and to formulate appropriate questions for research and policy decisions; (2) to acquaint the students with the general statistical procedures used in analyzing the nature or problems involved in the educational process; (3) to provide an opportunity for undergraduate students to actually participate in the conceptualization, development and evaluation of an educational research project; and (4) to identify qualified black students who are interested in pursuing graduate studies in educational development or in other related areas. It is apparent from the findings that in spite of their limited resources, black colleges are capable of providing adequate educational research experiences at the undergraduate level. Based on the findings and the conclusions of this report the following recommendations are made: (1) The federal government should continue to fund the research institute on an annual basis. (2) The research institute should be expanded to include: (a) multiple institutes operating simultaneously at different locations or colleges; and (b) the Academic Year Research Methodology Institute. Appendices include the institute staff and description of the site. (For related document, see ED 068 076.) (Author)

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Final Report

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A Program to Increase Educational Research Awareness Among Undergraduate Students in Predominantly Black Institutions

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TABLE OF CONTENTS

	Page
Chapter 1	
Background for the Institute	1
Chapter 2	
Procedures	3
Chapter 3	
Methods of Evaluation	7
Chapter 4	
Results	9
Chapter 5	
Conclusions and Recommendations	12
Appendices	14
A. Instructional Staff	
B. Description of Site	

CHAPTER I

BACKGROUND FOR THE INSTITUTE

Introduction

The continued growth in the number of new and revised educational programs has increased the demand for competent people in all areas of educational development. Many of these programs are aimed specifically at the improvement of the academic performance of children from lower socio-economic families. A large proportion of these children are from the Black community or from other minoirty groups.

Many academicians, e pecially Black educators, hold that educational problems and programs related to Black children should be studies, at least in part, by Black researchers. Although the pool of Black educators trained in research and evaluation has gradually enlarged over the past few years, there still remains a critical shortage of Blacks trained in these areas. The 1972 roster of the American Educational Research Association Special Interest Group "Research Focus of Black Education" revealed a total membership of only 80 Blacks, of which approximately one third are students. Although employed in educational research or related areas, less than fifty percent of the group professionally has had extensive training in educational research methodology and statistics.

At present the conceptual frame for studying educational problems and programs has the following orientation: Research, Development, Dissemination and Evaluation (RDD&E). Admittedly, development and dissemination as areas of study are relatively new to all, but these critical areas are even more unknown to the Black undergraduate student who may be planning his graduate studies.

The intent of this institute was to increase educational research awareness among undergraduate students in predominantly Black institutions. This increased awareness, hopefully, will stimulate interest in and cause more Black students to pursue graduate studies in educational research or in related areas.

Purposes and Objectives

The purpose of this six-week training institute was to orient a group of selected Black students to the nature of and general procedures related to the process and methodology of educational research. The primary objectives of the program are as follows:

1. To enable the students to identify pertinent educational problems and to formulate appropriate questions for research and policy decisions.

2. To acquaint the students with the general statisitical procedures used in analyzing the nature of problems involved in the educational process.

3. To provide an opportunity for undergraduate students to actually participate in the conceptualization, development and evaluation of an educational research project.

4. To identify a pool of qualified Black students who are interested in pursuing graduate studies in educational development or in other related areas.

Educational Significance

The vast number of new, different or revised educational programs that are being introduced in the nation's schools and numerous programs associated with various community agencies (for example model cities programs) demand an increased number of persons competent in RDD&E. In spite of the increased efforts of the Bureau of Research (USOE) and numerous other governmental and non-governmental agencies to alleviate the shortage of educational researchers, there still remain far too few Black people trained in this area. (See Paragraph 2, page 1). With the possible exception of evaluation, the other areas of educational development, namely program development and dissemination, are practically unknown to the Black undergraduate students.

Through the experiences that the students receive as a result of their participation in this summer program, interest will be aroused in the process and methodology of educational research. (This is verified by the final report of the 1970 Summer Institute conducted at Tuskegee Institute.) Upon return to their respective institutions these students are expected not only to continue in the pursuit of their research interest, but to stimulate such interest in other students of the college community.

Since the participants, for the most part, will be undergraduate juniors, an introduction to educational research at this stage in their program provides an opportunity for them to enroll in research related subjects during their senior year in college. These additional research courses could very well be influential in a students' decision to pursue graduate studies in some RDD&E related area.

Finally the identification of a pool of qualified Black students interested in preparing for careers in educational research and development should not be minimized. Upon approval of the final report of this project, the institute staff will produce a monograph that will be of benefit to other institutions in the development of programs oriented primarily to the recruitment and training of Black RDD&E personnel.

CHAPTER II

Procedures

The Instructional Program

The stated purpose of the institute was accomplished by means of an instructional program, components of which were designed to meet specific objectives. The institute program was conducted for a duration of six weeks, during which time one hundred seventy-four (174) clock hours were devoted to instructional activities. Table I summarizes the time distribution of each instructional activity.

TABLE I

Summary of Instructional Activity Time Distribution

Activities	Hr/Day	No. of Weeks	Total Class Hours
1. Total group presentation			
a. Introduction to educational research methodology	1½/M-F	6	45
b. Introduction to statistics for the behavioral sciences	1½/M-F	6	45
2. Introduction to basic Computer Concepts (First Three Weeks)	1½/M-T	3	18
3. Individual or small group activities (Final three weeks) Design and Conduct A Research Project	1½/M-T	3	18
4. Supervised Study	1½/M-Th	6	36
5. Process Evaluation Seminar	2/F	6	12
		Total	174

Participants received six semester hours (or equivalent) undergraduate credit for the training offered during the six week institute.

Research Methodology. The first objective of the institute was realized through the student's participation in a course in Educational Research Methodology. This was an introductory course designed primarily to acquaint the students with the process of research in education.

Statistics for the Behaviorial Sciences. Objective two was accomplished by relating the student with concepts discussed to actual research projects. These projects were conceptualized and implemented by the students in the research methodology component and the practicum component of the instructional program. Utilizing the acquanited statistical tools the students analyzed data and interpreted the results of the projects conducted as a part of their practicum.

Introduction to Basic Computer Concepts. The participants were made aware of the utilization of the computer in the educational process. Emphasis were in basic programming languages; use of existing software and computer data analysis.

Educational Research Project (Practicum). The third objective was met through the students particpation in a research project. Because of lack of time to work with each student individually, the students were divided into three groups. Each group used the concepts of research methodology in conjunction with their knowledge of statistics in order to define the problem, plan, conduct and evaluate a research project.

Consultants. The instructional program was greatly enhanced by the use of consultants. Dr. William H. Costine's (Florida State University) disscussion of Educational Research as an issue for administrative decision making, and Dr. Charles Smith's (FAMU) presentation on Institutional Research in the Predominantly Black Institution were very informative.

As indicated in the chapter IV findings, the objectives of the institute were satisfactorily accomplished through the designed instructional program.

Participants

The program (staff and facilities) was adequate to accommodate 32 participants. This number is in keeping with that suggested by the Bureau of Educational Research related to undergraduate research training programs. The participants were selected from 14 predominantly Black institutions.

In order to select students that were most likely to successfully pursue a graduate program in educational research the following selection criteria were established:

1. The student must be in "good" standing in his respective institution.

2. The student must have expressed a desire to pursue graduate studies.

3. The student must be recommended by three faculty members from his institution.

A brochure stating the purpose and objectives of the institute, describing the nature of the instructional program, student selection criteria and other detailed information relating to the institute was mailed to deans of College of Education, institutional research director and other selected personnel on the campuses of predominantely Black institutions. These selected individuals recommended to the director potential participants for the institute. From those recommended, the director and staff relying primarily on the students expressed reason for desiring to participate and the letters of recommendation identified participants.

Table II shows the institutions from which the participants were selected.

TABLE II

Institution and Number of Participants Selected
with Major Area of Study

Institutions	Number of Students	Major Area of Study
Alabama State University	2	History
		English
Central State University	1	Mathematics
Florida A & M University	3	Mathematics (2)
		Health & Physical Educ.
Hampton Institute	1	Political Science
Jackson State University	2	Elementary Education
		Sociology
Langston University	1	History
Lincoln University (Mo.)	1	Biology
Norfolk State College	1	History
Prairieview College	2	Sociology
Southern University	2	Mathematics
Tennessee State	1	Elementary Education
Texas Southern University	1	History
Tuskegee Institute	1	Sociology
Virginia State College	1	Fine Arts

CHAPTER III

Method of Evaluation

In order to ascertain the extent to which the objective(s) of the Research Institute were met, an attempt was made to look at some specific dimensions of the institute. The dimensions and the evaluation tools utilized to index the success or failure of the program are catagorized in the following manner:

Program Dimension	Evaluation Tool
Cognitive Domain	Student Grades
Program Development	Process Evaluation
Identification of Black Students	Follow-up Questionnaire and Campus Visitation

Throughout the implementation of the institute there was constant monitoring of student and program development issues. The purpose of their extra sensitivity to students and program development sprang from the perceived need of the Director and staff members to anticipate deviations from the stated objectives. The process evaluation cited below (page 8) played an important role in this monitoring effort.

Student Grades

Because the students desired to have the credits earned transferred to their home institution it was necessary to derive an academic grade. Although the staff recognized their necessity, the notion of grades was deemphasized. The following procedure for grading was employed:

Mid-term and final exams in statistics and methodology were used as the primary basis for deriving student grades. Since the nature of the institute was unique in its purpose, these instruments were locally designed by the institute staff. The purpose was to measure the academic achievement of the institute participants over a period of six weeks. Specifically, students grades were determined by averaging the grades earned in the statistical and metholdological components of the research institute. Wherever there was any doubt concerning a student's grade, the student's performance in the practicum component of the institute was influential in arriving at a grade decision.

Process Evaluation

Communication between the faculty and the students was aided greatly by expecially two practices: weekly evaluative seminars and personal interviews with students.

Through the evaluative seminars concerns of the students were aired and solutions to problems were sought in the presence of all participants immediately involved with the program. One outcome of this type of interaction between faculty and students in this program was a modification in the hourly schedule of daily classes. The class meetings were altered in order to allow the students to have a longer break period between classes as well as to reduce the total time spent in the classroom daily. With this alteration, the students seemed more energetic and less fatigued in their classes, especially, those held during the afternoon.

The individual interviews were held by the director primarily but not exclusively. Their purpose was essentially embedded in an attempt by the faculty to anticipate and provide help with any personal problems of students. Further, in these meetings students were also encouraged to attend graduate school.

Student Follow-up

The student follow-up consisted of two parts: (1) The Follow-up Questionnaire and (2) Campus Visitation. The Follow-up Questionnaire consisted of thirty-four items which provided the program director with specific information concerning participants' date of graduation, type of studies planned in graduate school, and the graduate schools to which they have submitted applications for graduate work. The campus visitation was limited to selected universities primarily as a function of time constraints under which the program director found himself.

Participants and interested students who were not program participants were contacted. Information concerning The Ohio State University program and sources of financial aid was related to these students. Students who were in need of application forms were supplied with them and were aided in their interpretation and completion by Dr. Gunnell.

CHAPTER IV

Results

The evaluation results provides strong support for the following thesis:

At least one way of identifying potential Black researchers (that is Black undergraduate students who are interested in, feel a need for and who are capable of developing skills in the area of educational research) is to expose them to the nature of educational research as well as its purposes, accomplishments and potential contributions to society via a program such as the Tuskegee Research Institute - 1970 and the Florida A & M Institute - 1971.

Student Follow-up

In early November, 1971, a follow-up questionnaire was mailed to each of the twenty participants. Supplementing this endeavor, the director to date has visited the participants on four of the campuses from which students were selected. The data at present reveal the following information. The two participants who had completed their senior year prior to the summer program, are presently enrolled in graduate school. They all receive financial assistance. The institutions and nature of support are as follows. The Ohio State University, research assistant and Pennsylvania State University, research assistant.

Since these students had applied for admission and for the most part had been accepted in graduate school prior to the summer program, there is a degree of uncertainty as to the influence of the program in the decision of their graduate pursuit. One of these students, nevertheless, is pursuing educational research methodology as a major area.

The remaining 18 students returned to their home campuses to complete the senior year. These students have completed the requirements for graduation at the time of this writing.

The follow-up findings in relation to the participants who are enrolled in graduate school, 1972-1973 academic year, are indicated in Table III.

TABLE III

Participants' Selection of Institution
and the Chance of Area of Study

Number of Participants	Change of Institution	Major Area of Study
1	Pennsylvania State Univ.	Research Methodology
1	Altanta Univ.	Sociology
1	Morgan State	Sociology
8	The Ohio State University	Educational Research/ Development
2*	The Ohio State University (Fall 1973)	Educational Research/ Development

*These two participants will enter graduate school after one year field experience.

The eight participants of the Florida A & M Institute presently enrolled in Educational Development at The Ohio State University are participants in the Academic Year Research Institute sponsored jointly by Title III, Division of College Support and the former National Center for Educational Research and Development.

In addition to the identification of the above students currently pursuing graduate work, the experience at Florida A & M provided an opportunity to contact and acquaint a number of other students with the need for more Blacks trained in the area of educational research. As a consequence of this opportunity, an additional two persons interested in pursuing graduate studies in this area were identified. These individuals entered the doctoral program in Educational Development at The Ohio State University in the fall of 1972.

With respect to those students who plan to enroll at The Ohio State University, Dr. Gunnell has visited their campuses, supplied them with the necessary admission forms, alerted the dean of the Graduate School that they will be applying and is at present arranging for their complete financial package.

In conjunction with other indications of success of the institute, the director and staff are of the opinion that the identification of thirteen students who are currently pursuing graduate work in the general area of RDD&E is the paramount accomplishment of this research institute. A further testimony to the effectiveness of a research institute of this nature is the fact that 88% of these participants identified indicated that they would not have pursued graduate studies in this area had they not been exposed to this awareness program.

CHAPTER V

Conclusions and Recommendations

Conclusions

It is apparent from the findings that:

(1) A research institute conducted with the particular goals and objectives as defined here is a viable way of identifying a pool of students with the potential for pursuing graduate studies in educational research or related areas.

(2) In spite of its limited resources, Black colleges are capable of providing adequate educational research experiences at the undergraduate level.

(3) The selection of participants upon the completion of their junior year of their undergraduate academic training proved to be appropriate in that the participant then would upon return to their respective campuses:

   a) pursue additional course work in research related fields.

   b) positively influence other students, with respect to the pursuit of careers in educational research.

   c) provide the institute staff with an opportunity to conduct follow-up activities to further enhance the probability that they will select research as their career choice.

Recommendations

Based on the findings and the conclusions of this report the following recommendations are made:

1. The Federal Government should continue to fund the research institute on an annual basis.

2. The Research Institute should be expanded to include:

   (a) Multiple institutes operating simultaneously at different locations or colleges.

   (b) Academic Year Research Methodology Institute.

Audiences to be Served

The nature of the instructional program, the procedure for participant selection, the evaluative methods and results and other pertinent facets of the institute are of significant value to a diversity of institutions and agencies. Paramount among these agencies are:

1. U.S. Department of Health, Education and and Welfare Office of Education, Bureau of Research.

2. Directors of RDD&E programs. (Federally, state or Institutional supported)

3. Black Universities and Colleges that are interested in instituting research programs.

4. Educational Research Related Professional Organizations (e.g., A.S.A.)

Upon approval of the final report, a summary of the research Institute and findings, conclusions and recommendations will be made available to these and other agencies that are interested in research training programs aimed primarily at Blacks and other minority groups.

A P P E N D I C E S

APPENCIX

A. INSTITUTE STAFF

B. DESCRIPTION OF SITE

APPENDIX A

Instructional Staff

A. Director and Instructor of Educational Research Methodology

Dr. James B. Gunnell, Director of the Summer Institute in Educational Research Methodology, Tuskegee Institute, Alabama, Summer 1970; Assistant Professor of Education, Faculty of Educational Development, The Ohio State University, Columbus, Ohio; B.S. degree, Mathematics, Virginia State College, Petersburg, Virginia, 1956; M.S. degree, Mathematics, University of Notre Dame, South Bend, Indiana, 1962; Ed.D. Educational Research and Statistics, New Mexico State University, Las Cruses, New Mexico, 1969.

B. Associate Director and Instructor of Educational Research and Methodology

Dr. Frank S. Black, Education Evaluation and Research, Faculty of Educational Development, The Ohio State University; B.S. degree, Elementary Education, Central State University, Wilberforce, Ohio 1967; M.A. degree, Sociology 1969, The Ohio State University, Columbus, Ohio, Ph.D. Educational Development and Evaluation 1972, The Ohio State University.

C. Teaching Staff, Instructor of Basic Computer Concepts

Gilbert Taylor, Assistant Professor in Data Processing, Florida A & M University.

D. Consultants

Dr. Charles Smith, Florida A & M University
Dr. William Costin, Florida A & M University

E. Instructional Assistant (Robert Talley)

This student served as material preparation specialist during the planning phase and as instructional assistant during the training program.

F. Secretary (Barbara Newkirk)

Regular secretarial duties.

G. Laision Person(s)

Dr. Paul B. Mohr, Dean, School of Education, Florida A & M University.
Dr. Ossifield Anderson, Department of Mathematics, Florida A & M University.

APPENCIX B

Educational Research Training Capability

Florida A & M University, a state university, has six subdivisions. They are: College of Arts and Sciences, School of Agriculture and Home Economics, School of Education, School of Nursing, School of Pharmacy, and School of Technology.

Florida A & M University holds full membership in the Southern Association of colleges and schools, the American Council on Education, The American Association of Colleges for Teacher Education, The Association of Colleges and Secondary Schools, the Department of Baccalaureate and Higher Degree Programs of the National League of Nursing, and the American Asssociation of University Women. The University is fully accredited by The Florida State Board of Education, and by the following agencies: the National Council for Accreditation of Teacher Education, the Department of Education of the State of Florida, the Florida State Board of Nursing, and the American Council on Pharmaceutical Education.

General Objectives of the College

Florida A & M University is one of the institutions of higher education under the governing authority of the State Board of Education.

Its objectives are the following: the development of men and women for productive citizenship, effective service, and responsible leadership.

Its functions are carried out through a program that assists the student to:

1. develop positive attitudes relative to personal and community health;

2. become more effective in the understanding and use of the methods and symbols of communication;

3. understand and appreciate the social heritage and the importance of individual integrity and respect for personality in its development;

4. develop appreciation of and devotion to higher levels of moral and spiritual life, as well as appreciation of the finer expressions of the human mind;

5. develop habits of critical thinking that may be applied to the solution of individual and social problems;

6. develop those understandings and skills that are necessary to the business of making a living; and

7. contribute to greater human welfare through creative and interpretative research.

The university seeks to realize its educational objectives through the following academic organizations:

I. The School of Agriculture & Home Economics

II. The College of Arts & Sciences

III. The School of Education

IV. The School of Nursing

V. The School of Pharmacy

VI. The School of Technology

VII. The Divisions:

1. Division of Graduate Studies in School of Education

2. Military Science Division

3. Division of Industrial Education

4. Division of Industrial Technology

The Florida A & M University Library System

The Coleman Library--facilities include rooms designed and utilized specifically for reading, browsing, periodicals, reference, reserve, cataloging, and special collections, as well as space for work in Library Science. The library now contains over 100,000 volumes. Special collections are on the Negro and on Florida.

The Computer Service

The Computer Center at Florida A & M University is designed to serve the College Administration, all Schools, Divisions, and Departments; it is not identified singularly with any School, Division, or College Administrative function. While the Computer Center is used for certain administrative functions, all schools and departments may use it for instruction in courses related to electronic data processing. The faculty may use the computer for certain research projects; this is accomplished by scheduling rather than by priority.

The primary functions of the Computer Center are to enhance the education of students; to apply information for management decisions and to process data for the operation of the College.

The Center has an IBM 1401 Computer. It has relatively large high-speed storage capacity, facilities for communication, variable-length field capabilities, and the ability to process efficiently both commercial and scientific computation.